

XLV. *Descriptions of two new Coleopterous Insects, from the Collection of Sir Patrick Walker. By G. R. WATERHOUSE, Esq., Curator to the Museum of the Zoological Society.*

[Read 7th August, 1837.]

THE two insects I am about to describe, having been placed in my hands for that purpose by Sir Patrick Walker, belong to the section *Longicornes*. The first I shall notice is evidently closely allied to the genus *Dorysthenes*, founded by Mr. Vigors, in the *Zoological Journal*,\* upon the *Prionus*† *rostratus* of Fabricius, but may at once be distinguished by the absence of the large spine on the prosternum, which constitutes so remarkable a character in that genus, and by the prothorax being produced at the sides, and forming, on either side, three large spines. These distinctions induce me to describe it under a new sectional name; it agrees however in so many respects with *Dorysthenes*, that I can but regard it as constituting a subdivision of that genus.

Family PRIONIDÆ.

Genus DORYSTHENES.

Sub-genus BALADEVA.‡

*Antennæ* 12-articulatæ; articulo primo elongato, subcylindrico, ad apicem crassiore, secundo brevi, subconico; tertio primo longiore compressiusculo; cæteris gradatim decreescentibus, penultimo et quatuor prioribus ad apicem cyathiformibus et in processus duos compressos productis, quarto et quinto in processum unicum internè productis, secundo, tertio et quarto subtùs spinis frequentibus minutis obsitis.

*Mandibulæ* elongatæ, subgraciles et parùm incurvatæ, dentibus internis nullis, at denticulo externo ad mediam partem armatæ.

\* Vol. ii. p. 514. Pl. XIX. fig. 4.

† [It seems probable that *Dorysthenes* of Vigors, *Dissosternus* of Hope, and a new genus lately published by Guérin, together with *Baladeva* of Waterhouse, form a peculiar family in the *Prionidæ*.—F. W. H. To these must also be added *Cyrtognathus paradoxus*, Falderm, and *Prionus Indicus*, Hope's Col. of Nepaul.—J. O. W.]

‡ The name of Hercules in India. It is suggested by the great size and strength of the insect, combined with its habitat.

[Obs.—Mr. Hope suggests that the name should be *Baladevus*, to agree with *Prionus*; but *Baladeva* must be masculine, and therefore the character *niger* must also be masculine.]

*Palpi maxillares* compressi, 4-articulati, articulo primo brevi, secundo et quarto elongatis, et inter se ferè æqualibus, tertio mediocri, ultimo ad apicem paulò latiore et truncato.

*Palpi labiales* compressi, triarticulati, articulo primo brevi, secundo et tertio elongatis, hòc ad apicem latiore et truncato.

*Labium* minutum ad apicem bifidum.

*Thorax* ad latera dentibus magnis armatus.

*Pedes* mediocres, femoribus tibiisque compressis; tibiis, nec non femoribus subtùs, spinis minutis confertis armatis.

*Corpus* subelongatum. *Collum* productum.

*Baladeva Walkeri.* (Plate XXI. Fig. 1.)

*B. niger*; pedibus antennisque ad apicem piceis; capite brevi; thorace glabro, dentibus duobus magnis ad latera, nec non angulis posticis acutè productis; elytris irregularitèr et crebrè rugosis, lateribus lævioribus lineisque duabus elevatis longitudinalitèr excurrentibus.

Long. corp. 2' 10''; lat. 1' 0½''.

Habitat in Indiâ Orientali.

I have named this magnificent insect after the most amiable and zealous Entomologist to whom it belongs. In size it greatly exceeds the *Prionus rostratus* of Fabricius, and is proportionately broader, but agrees with that species in the structure of the antennæ, palpi, and legs; the tarsi however are broader; it moreover has the hinder portion of the head greatly elongated, the large transverse eyes separated above by a narrow space, and the large mandibles which we observe in the insect just mentioned.

The mandibles, which measure eleven lines in length, are rather slender, slightly curved inwards, and pointed; they present a tolerably sharp inner edge, and on the outer side is a small tooth situated about halfway between the base and apex of the mandible; again, between this tooth and the base, numerous very minute denticulations are observable. The length of the head (measuring from the labrum to the thorax) is 9 lines, and its greatest width, which is towards the base, is  $6\frac{2}{3}$  lines; between the eyes is a central longitudinal groove, and a longitudinal ridge on either side forms the inner margin of the eye; the eyes are large, transverse, and slightly emarginated in front: behind the eyes, the upper surface of the head is smooth, or very nearly so; on the under surface are numerous small, irregular transverse rugæ, the fore part is dilated, and produced on either side into an angle. The prothorax is broader than long, its length being  $5\frac{3}{4}$  lines, and width

(without including the large spines)  $9\frac{2}{3}$  lines; the anterior and posterior margins are slightly waved, and the fore part is rather broader than the hinder; the lateral margins are each armed with three acutely angular projections, the points of these processes being directed outwards; one is situated in front, one behind, and the third in the middle of the lateral margin; of these the last-mentioned is the largest, and the posterior spine (which may be regarded as a produced hinder angle of the thorax) is the smallest; the upper surface of the thorax is very delicately punctured, but to the naked eye appears smooth. The prosternum is greatly produced downwards on the hinder part, and the fore-legs are joined to this produced portion; between the bases of these legs is a narrow process of the prosternum, which, as it were, folds over the coxæ, its apex (which is obtuse) being directed backwards and upwards. The mesosternum has an obtuse process in front, the point of which is inserted under the process of the prosternum just described. The elytra are broadest at the base, attenuated behind, and very slightly dilated in the middle; the shoulders, or outer anterior angle, is slightly produced, they are covered with numerous minute, irregular rugæ, and these for the most part have a longitudinal direction; on each elytron are two, somewhat indistinct, elevated longitudinal striæ. The antennæ, if extended backwards, would reach rather beyond the middle of the elytra. The legs are moderately long and compressed; and on the underside of each of the femora are two longitudinal rows of minute pointed tubercles; on the four posterior femora, the space between these tubercles is concave, on the anterior femora it is flat. The tibiæ are furnished both on the upper and under sides with thickly-set minute tubercles. The tarsi are rather broad, especially those of the anterior pair of legs. The scutellum is of moderate size, rounded behind, and pointed in front.

## EXPLANATION OF THE PLATE XX.

Fig. 1. *Baladeva Walkeri*, natural size.

1 a. Side view of the head and prothorax.

1 b. The labrum.

1 c. The labium, and portions of the maxillæ, with their palpi.

I now proceed to the second insect,—one whose place in the system I find it difficult to determine. Its somewhat broad form and short antennæ led me at first to suppose it might be allied to some of those genera which in most classifications follow the *Prionidæ*—*Pæilosoma*, *Megaderus*, &c.—in the structure of its

thorax, mesosternum, legs, and antennæ, (if we except the length); and in the form of the head it however agrees most nearly with that group of which *Cerambyx moschatus* may be regarded as the type,—the genus *Callichroma* of Latreille.\*

The general form of the head is that of *Callichroma*; the basal joint of the antenna is stout, as in that genus, and the remaining joints differ only in being a trifle shorter; they bear the same relative proportions one to another; the two terminal joints unfortunately are lost, but if present, the antennæ would no doubt, when bent backwards, extend nearly to the apex of the elytra; the thorax is broader than long, and nearly equal in width to the elytra; the upper surface is slightly uneven, and has scattered punctures, but no distinct tubercles. In the prothorax there is a great resemblance between this insect and the species of *Callichroma*, excepting that it is proportionately broader and shorter, and has the lateral projecting tubercle somewhat obtuse, instead of acute, as in that genus; the prosternum is also of the same structure. The mesosternum differs in having an obtusely pointed tubercle situated between the middle pair of legs. The elytra are broader than in *Callichroma*, more obtusely terminated, and also differ in having a glossy brilliant surface, instead of the somewhat dull and silk-like texture, so general in that group. The legs are less compressed, and rather shorter, and the hinder tibiæ are not curved. The tarsi resemble those of the genus with which I am comparing it.

The presence of a tubercle on the mesosternum, the shortness of the antennæ, greater width of the body, and straight hinder tibiæ, combined with other distinctive characters pointed out, renders it necessary to separate this insect from *Callichroma*. I propose therefore to characterize it under the name *Callona*† *tricolor*.

*Callona tricolor.*

*C. splendide viridis; capite, thorace, antennis, tibiis tarsisque nigris; thorace maculis duabus lunulatis ad latera insignito, his, nec non femoribus, corporeque subtus sanguineis; segmentis abdominis posticè nigris.*

Long. corp.  $13\frac{1}{2}$  lin.; lat.  $4\frac{1}{2}$  lin.

Hab. Caraccas?

\* The palpi, which would furnish some guide in determining the affinities of this insect, are unfortunately broken off.

† From *καλλὼν*, *beauty*.

This beautiful insect Sir P. Walker has some reasons for believing is from Caraccas ; he is however not sure of this being the true habitat.

The head and antennæ are black ; the former is punctured, and has a longitudinal groove between the eyes ; the thorax is also black ; but on either side is a large somewhat irregular red patch, and in front of this is a small spot of the same colour ; a small red spot is also observable on either side of the prosternum, near the base of the legs ; the sides of the thorax are produced in the middle into an obtuse angle, and it has a transverse indentation behind. The scutellum is of moderate size, of an elongate triangular form, black, obscurely tinted with green, and slightly concave. The elytra are of a most brilliant glossy green colour, and very finely punctured ; on the anterior half are some delicate rugæ. The mesosternum is black ; the metasternum red, and darkly tinted on the fore part and sides ; the segments of the abdomen are also reddish, but are edged with blackish ; the tibiæ, tarsi, coxæ, and basal and apical portions of the femora, are black ; the remaining portion of each femur is red.

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XLVI. *On the Use of the Antennæ of Insects.* By GEORGE NEWPORT, *Member of the Royal College of Surgeons, and V. P. of the Entomological Society of London.*

[Read 1st January, 1838.]

MOST of the following remarks on the use of the Antennæ were prepared for publication in the summer of 1831, and transmitted at that time to the editor of one of the monthly journals,—the Magazine of Natural History,—but from an accidental circumstance were not published. Since that period some of the views here adduced have been advocated by other naturalists. The author, therefore, does not now present them to the Society as entirely novel, but only as being a summary of facts (many of which fell under his own observation) that tend to indicate the true use of these organs.

There are no parts in an insect which are perhaps less understood, or have given rise to more controversy, than the Antennæ. From their being immediately connected with the head, and largely